

June 6, 2017

Owen Lawlor  
Moss Beach Associates  
612 Spring Street  
Santa Cruz, CA 95060

**Development Plan Review  
Moss Beach Ocean Development  
Moss Beach, California**

Dear Owen:

At your request, Zander Associates has completed an assessment of the revised development plans for the Moss Beach Ocean Development located at Vallemar St. and Julianna Ave. in Moss Beach, California. The purpose of our assessment was to evaluate potential project effects on coastal prairie grasslands onsite and on the occurrence of coast yellow leptosiphon (*Leptosiphon croceus*) just west of the property line. This letter provides the results of our assessment.

The following plans and documents were reviewed for this assessment:

- Civil Engineering Plan Set (Sheets C1.0 through C8.0) dated 4/26/17, prepared by Mesiti-Miller Engineering, Inc., dated 4/26/17
- County Coastside Design Review Submittal dated 4/26/17, prepared by Pearson Design Group, Verde Design and Mesiti-Miller Engineering, Inc.
- Preliminary Storm Drainage Report for Moss Beach Development prepared by Mesiti-Miller Engineering, Inc., dated April 26, 2017
- Vallemar Bluffs Conservation Strategy prepared by Jodi McGraw Consulting, dated June 2017
- Vallemar Bluffs Conservation Area Adaptive Management and Monitoring Plan Annotated Outline and Goals and Objectives prepared by Jodi McGraw Consulting, dated August 22, 2016

The Moss Beach Ocean Development is situated on a 2.4 acre property located in Moss Beach, California on coastal bluffs overlooking the Pacific Ocean just west of Highway 1. The site comprises seven currently undeveloped lots of record with access provided by Vallemar and Juliana Streets along the easterly and southerly property lines respectively. The site can be broadly divided into two vegetation types: remnant coastal prairie grasslands on the west and disturbed/ruderal grounds, mostly under a Monterey cypress (*Hesperocyparis macrocarpa*) canopy on the east and without tree cover on the southwest corner. The promontory overlooking the ocean just offsite to the west (on public open space lands) supports a population of coast yellow leptosiphon (*Leptosiphon croceus*), which was recently designated as a candidate for listing as endangered by the California Department of Fish and Wildlife, and is ranked by the

California Native Plant Society (CNPS) as seriously threatened in California (1B.1). There is no coast yellow leptosiphon on the development property.

The revised development plans propose to consolidate the property into four lots and construct four single-family homes, one on each lot. The building envelopes have been sited within the disturbed/ruderal grounds onsite and minimize direct removal of the remnant coastal prairie grasslands. Access to all lots is from Vallemar Street and the western portion of each lot will remain and/or be restored as coastal prairie grassland. Sheet L3.3 in the Design Review submittal (4/26/17) identifies those areas as existing coastal prairie grassland to remain and be protected (14,424 sq. ft.), and onsite coastal prairie restoration (25,113 sq. ft.). It also identifies another 14,868 sq. ft. of the bluff outside but adjacent to the project site, including the existing population of coast yellow leptosiphon, to be restored, subject to County approval. The drainage plan calls for utilizing infiltration trenches with overflow spreaders to disperse the runoff over wide areas and maintain existing hydrology and soil moisture distribution on the site so as to minimize indirect effects on sensitive habitats. This will also prevent concentrated runoff from flowing over the bluffs and reduce potential for soil erosion.

Jodi McGraw Consulting has developed a Conservation Strategy (June 2017) and an annotated outline for an Adaptive Management and Monitoring Plan (August 2016) to address the areas of coastal prairie grassland on and immediately adjacent to the property that would not be directly affected by the construction of homes. The conservation strategy includes measures to limit development impacts on the sites conservation values and calls for permanent protection of the coastal prairie habitat remaining on each lot via a conservation easement. The adaptive management and monitoring program would be developed in collaboration with County Parks staff to direct long-term management of the onsite conservation easement area and the coastal bluff open space lands to the west. Funding for management would be obtained through home owners' association (HOA) fees, an endowment, or other appropriate funding mechanism (McGraw 2017).

The conservation easement area is depicted on Figure 2 in the Conservation Strategy (McGraw 2017), and on Sheet L3.3 of the Design Review submittal (4/26/17) as all of the property west of the Biotic Easement Line, and totals approximately 0.91 acre.

## ASSESSMENT

The revised development plans minimize direct effects on the coastal prairie grassland habitat by siting development within the disturbed/ruderal areas on the property and designating the western edge of each lot for protection/restoration of coastal prairie grassland. Indirect effects on sensitive habitats should be minimized by the following actions:

- Implementing the drainage improvement recommendations provided by Mesiti-Miller Engineering, Inc. (2017) to limit impacts to the coastal prairie, erosive bluff edge, and the near-shore marine environment. These recommendations include: utilizing infiltration trenches with overflow spreaders on each lot to disperse the runoff over wide areas and

maintain existing hydrology and soil moisture on the site, and; using pervious pavers and detention areas to control peak runoff.

- Landscaping with native plants from a palette of species native to coastal San Mateo County as indicated on Sheets L3.3 and L3.4 of the Design Review submittal (2017).
- Implementing the conservation strategy developed by McGraw (2017), which would permanently protect the coastal prairie grassland habitat outside of the development envelopes via a conservation easement granted in favor of a non-profit conservation organization (e.g. land trust) or government agency. The easement will preclude development or other activities that degrade the biotic, scenic, recreational values of the site. It will also provide the grantee affirmative rights to manage these values.
- Formalizing the boundaries of the conservation easement area, identifying the grantee, and establishing restricted and allowable uses. According to the revised development plan, the conservation easement area will be approximately 0.91 acre in extent.
- Developing an Adaptive Management and Monitoring Plan following the annotated outline prepared by McGraw (2016). To address management of the larger coastal prairie community on the site, the AMMP will be developed in coordination with San Mateo County Parks Department, which manages habitat within the adjacent Fitzgerald Marine Reserve. The management plan will feature elements for each property, to address their unique circumstances, as well as joint elements designed to promote effective, coordinated management.
- Establishing the funding mechanism for long-term management and monitoring of the conservation easement area.
- Adopting use restrictions for the lots to protect the sensitive habitats, including restrictions on the use of pesticides and fertilizers and pet access.

We believe that incorporation of the measures described above will allow preservation and restoration of the sensitive coastal prairie grasslands on the site in perpetuity and provide an opportunity for sustaining and enhancing the population of coast yellow leptosiphon just west of the property line.

Should you have any questions regarding our review and assessment, please don't hesitate to call me.

Sincerely,



Leslie Zander  
Principal Biologist

cc: Jodi McGraw

***Vallemar Bluffs***  
***Conservation Strategy***



**Moss Beach Associates**

**June 2017**

## The Site

Valleymar Bluffs is a 2.4-acre property located in Moss Beach in northern coastal San Mateo County (Figure 1). On the north and south, it abuts residential developments connected by Valleymar Street, which also adjoins the property on its eastern border. On the west, the site abuts the northern portion of the Fitzgerald Marine Reserve—a 46-acre, three-mile long coastal area that is owned by the County of San Mateo and managed by the County Parks Department for conservation, recreation, and public education.

## The Vegetation

Valleymar Bluffs features a mosaic of plant communities that likely reflects its soils, climate, and prior land use. Located in the central western portion of the property, approximately 0.4 acres supports remnant coastal prairie, which is dominated by native grasses and forbs adapted to the maritime climate and relatively thin, clayey soils. The 1.8 acres on the south and eastern portions of the property are dominated by exotic plants including iceplant (*Carpobrotus edulis*) and Monterey cypress (*Hesperocyparis macrocarpa*). The remaining 0.3 acres are transitional between these mapped community types, as they feature a greater proportion of native plants than the exotic-dominated areas, but a greater abundance of exotic plants than the mapped coastal prairie (Zander Associates 2015).

## Rare Species

Four rare plant species have been observed within the strip of coastal prairie immediately adjacent to the Moss Beach bluff edge, which is located within the Fitzgerald Marine Reserve (Table 1). Two rare plant species have been observed inland within the Valleymar Bluff property during two prior spring surveys (Zander Associates 2015; Table 1).

**Table 1: Rare plants known to occur atop Moss Beach Bluff**

Species	Status	Distribution and Habitat	Valleymar Bluffs Property	Fitzgerald Marine Reserve
Blasdale's bent grass ( <i>Agrostis blasdalei</i> )	CRPR 1B.1	coastal strand between Santa Cruz and Mendocino counties	Absent	Present
harlequin lotus ( <i>Hosackia gracilis</i> )	CRPR 4.1	coastal communities, British Columbia to central California	Present	Present
Johnny nip ( <i>Castilleja ambigua</i> ssp. <i>ambigua</i> )	CRPR 4.2	coastal communities, British Columbia to central California	Present	Present
coast yellow leptosiphon ( <i>Leptosiphon croceus</i> )	CRPR 1B.1	Moss Beach Bluff (single known location)	Absent	Present

California Rare Plant Rank (CRPR): 1B = Rare or endangered in California and elsewhere, 4 = "Watch List" plants with limited distributions or infrequent presence throughout California.

Decimals after the Status categories represent the Threat rank (e.g., "List 1B.1"): X.1 = Seriously threatened populations, X.2 = Marginally threatened populations, X.3 = Populations with limited threats.

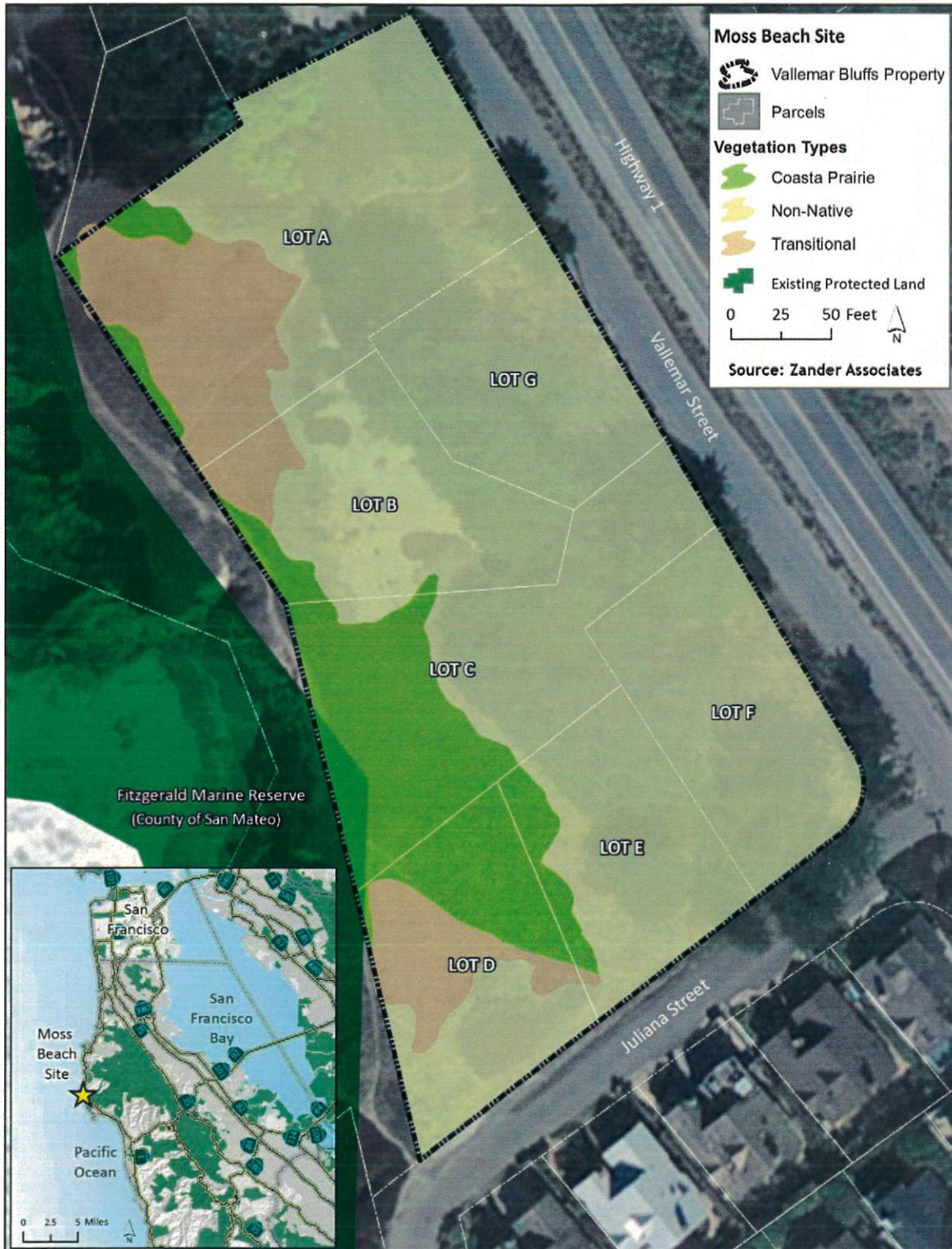


Figure 1: Vallemar Bluffs Property, existing parcels, and vegetation. Gap between the Fitzgerald Marine Reserve and the Vallemar Bluff property may represent mapping error.

Coast yellow leptosiphon (*Leptosiphon croceus*) has been proposed for listing under the California Endangered Species Act (Corelli 2016). The species is only known to occur in this single location, where it occupies an estimated 180-square-foot (30' x 60') area (Corelli 2016). Other documented occurrences in the California Natural Diversity Database and herbarium specimens are thought to represent taxonomic or geographic errors (Corelli 2016).

### **The Conservation and Development Proposal**

Currently, Vallemar Bluffs consists of seven legal lots, which range in size from 0.26 to 0.63 acres (Figure 1). As part of the proposed conservation and development project, the lots will be consolidated into four lots, each of which will be developed to feature a single-family home. The development envelopes are largely sited within the exotic-dominated vegetation on the eastern portion of the parcel, to limit impacts on the coastal prairie (Figure 2). Additional measures that will limit the impacts of development on the site's conservation values include:

- Retaining healthy trees to protect scenic values of the site;
- Managing storm water and drainage to limit impacts to the coastal prairie, erosive bluff edge, and the near-shore marine environment;
- Landscaping with native plants from a palette of species native to coastal San Mateo County, and prohibiting planting of invasive species that could spread into the adjacent preserve; and
- Use restrictions for the lots to protect the adjacent preserve, including restrictions on the use of use of pesticides and fertilizers, requirements that pets remain in yards or indoors, and limitations on fences and hardscaping.

A 0.91 -acre area outside of the development envelopes will be permanently protected via a conservation easement, which will be granted to non-profit conservation organization (e.g. land trust) or government agency (Figure 2). The easement will preclude development or other activities that degrade the biotic, scenic, recreational values of the site. It will also provide the grantee affirmative rights to manage these values.

### **The Adaptive Management and Monitoring Plan**

The preserve management and monitoring activities will be described in an adaptive management and monitoring plan (AMMP). To address management of the larger coastal prairie community on the site, the Plan will be developed in coordination with San Mateo County Parks Department, which manages habitat within the adjacent Fitzgerald Marine Reserve. The management plan will feature elements for each property, to address their unique circumstances, as well as joint elements designed to promote effective, coordinated management.

As outlined in greater detail in the draft, annotated outline for the plan (McGraw 2016), the AMMP is anticipated to include:

- Goals and objectives to conserve and restore the biotic, scenic, recreational, and other conservation values of the site;
- Management strategies to achieve the goals and objectives, including:

- a rare plant management and monitoring program, to protect and where possible, expand, the population of coast yellow *Leptosiphon*, as well as promote habitat conditions for the three other rare plants (Table 1);
  - exotic plant management to promote native plant and animal species;
  - recreation management, to support compatible public use including by re-routing the County's existing trail along the bluff into the preserve, as needed, to prevent its loss due to coastal erosion; and
- Monitoring to evaluate the effectiveness of management and identify additional measures that are needed to achieve the goals and objectives of the preserve.

The adaptive management and monitoring plan will be developed by a qualified biologist on behalf of Moss Beach Associate, in collaboration with staff the County Parks Department. Input will also be obtained from the conservation easement holder to facilitate effective long-term protection of the habitat.

### **Funding**

The costs to manage the preserve will be identified through preparation of a property analysis record, or a similar process designed to estimate long-term management and monitoring costs based on the AMMP. The initial and capital costs to establish the preserve during the first three years will be funded by the project proponent, Moss Beach Associates. The ongoing management and monitoring costs for the conservation easement area will be paid by the home owners through home owners' association (HOA) fees, and endowment, or other appropriate funding mechanism.

### **References**

- Corelli, T. 2016. A petition to the State of California Fish and Game Commission to list coast yellow leptosiphon (*Leptosiphon croceus*) and endangered. May 23, 2016. 16 pages.
- McGraw, J. Draft annotated outline for an Adaptive Management and Monitoring Plan for the Moss Beach Bluff Conservation Areas. Prepared for Moss Beach Associates. August 16, 2016. 9 pages.
- Zander Associates. 2015. Vegetation characterization and mapping of the Moss Beach Lots, Moss Beach, CA. Letter report prepared by Michael Zander, of Zander Associates for Owen Lawlor, Manager, Moss Beach Associates. May 21, 2015.



CONSULTANT  
 PROJECT NAME  
 EXISTING TREES AND VEGETATION  
 MOSS BEACH OCEAN DEVELOPMENT  
 PROJECT ADDRESS  
 VALLEMAR ST. & JULIANA AVE  
 MOSS BEACH, CA

SUBMITTAL  
 DESIGN REVIEW APPLICATION  
 DESIGN REVIEW SUBMITTAL

NO. 1 REVISIONS  
 DATE

DESIGNED BY  
 PH  
 DATE ISSUED  
 03/24/17  
 SCALE  
 AS SHOWN  
 PROJECT NO.  
 1500600-1668  
 SHEET NO.

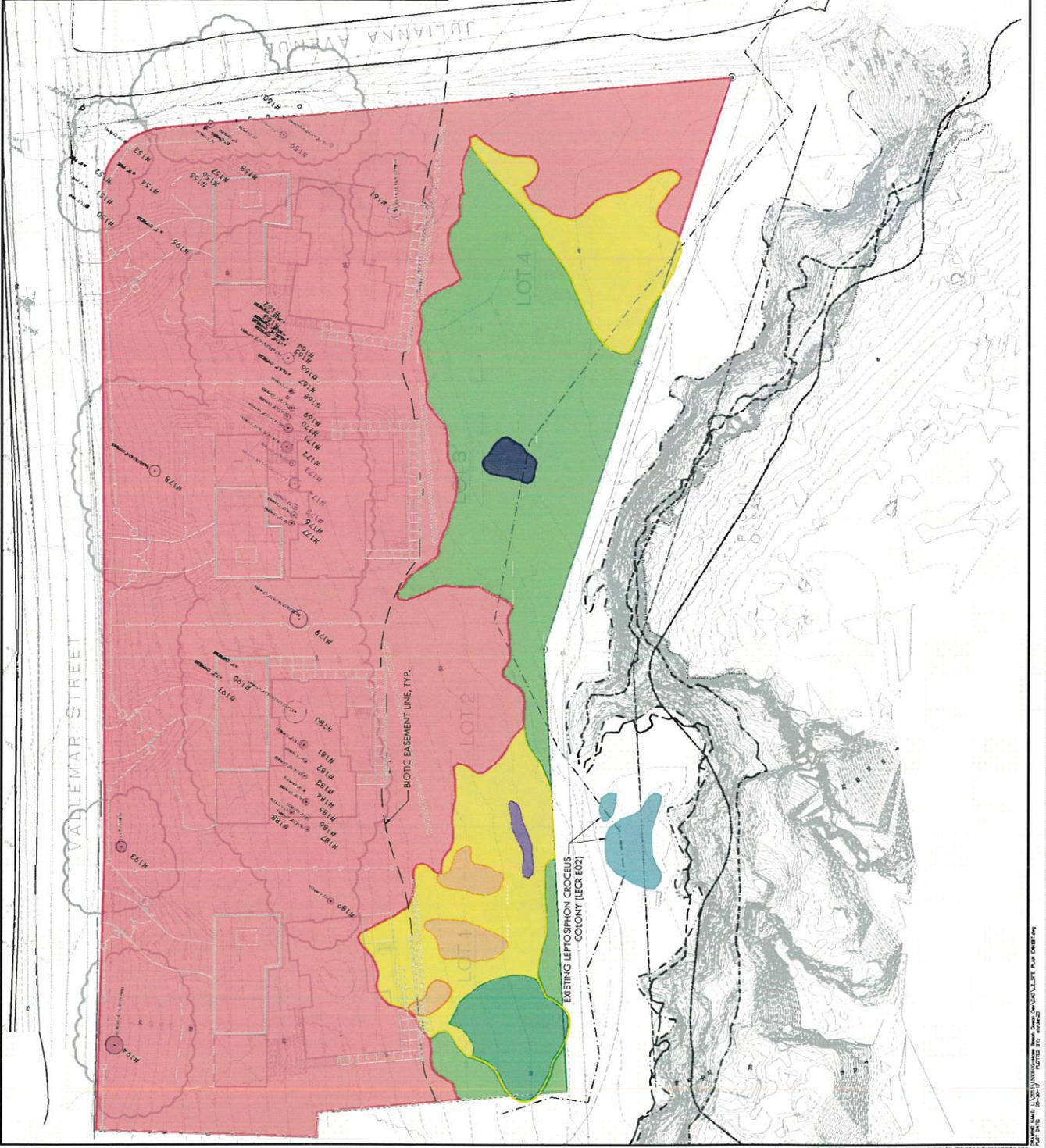
Figure 2 OF SHEETS  
 EXISTING TREES & VEGETATION

**SITE PLAN LEGEND**

SYMBOL	DESCRIPTION
(Symbol)	TOP EDGE OF BUFF
(Symbol)	TOP OF BERM
(Symbol)	1983 BUFF EDGE
(Symbol)	TOP OF BEACH
(Symbol)	MOSS BEACH BEACH EMBANKMENT MAP A-204 AS DATED MAY 1988

**EXISTING TREES AND VEGETATION TYPES LEGEND**

SYMBOL	DESCRIPTION
(Green)	ZONE A - COASTAL PRAIRIE GRASSLAND
(Yellow)	ZONE B - TRANSITIONAL AREA
(Orange)	ZONE C - HIGHLY NATIVE VEGETATION
(Red)	CEPHALEANT
(Purple)	RECREATION/DOWNWIND AREA
(Blue)	DATE PALM/DOMINANT AREA
(Light Blue)	BACKYARD TREES
(Dark Blue)	REPRODUCTION EXCEEDED - TREE ELEMENT OCCURRENCE 0.2 TO 0.50 (BASED ON TREE SPECIES AND SIZE) (SEE TABLE 1 AND SPECIES LIST)
(Circle)	TREE ID



THE USER SHALL BE RESPONSIBLE FOR VERIFYING THE ACCURACY OF THE INFORMATION PROVIDED ON THIS PLAN. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES. THE USER SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM THE APPROPRIATE AGENCIES.